UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,485	10/11/2001	Chhandomay Mandal	P5983	9786

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EXAMINER
HOANG, PHUONG N

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/975,485	MANDAL ET AL.
	Examiner	Art Unit
	Phuong N. Hoang	2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 October 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 - 25_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1 - 25_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _11 October 2001_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 25 are pending for examination.

Specification

2.   The disclosure is objected to because it contains an embedded hyperlink and/or

other form of browser-executable code (page 8 line 23). Applicant is required to delete

the embedded hyperlink and/or other form of browser-executable code. See MPEP §

608.01.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3.   Claims 1, 11, and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over independent claims 1, 12, and 23 of Application No. 09/965,218 (refer as 218). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between the application no. 218 and this case is the claimed discovering and configuring the data volumes from the storage device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that in order to retrieve data, data has to be discovered and configured in the storage device.

4.   Claims 1, 11, and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over independent claims 1, 9, and 17 of Application No. 09/960,122 (refer as 122). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between the application no. 122 and this case is the claimed designate master volumes, shadow volumes, and bitmap volumes, and to transfer data between specified master and shadow volumes. It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that in order to retrieve data, data has to be adjusted in volumes and transferred for retrieving step.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claims 1 – 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

     a.   **As to claim 1,** applicant claimed "inserting an interface layer between the driver software and the storage device, the interface layer exporting a platform dependent API and controlling data passing between the driver software and the storage device". Examiner sees that the specification, page 9 sections 41 to 43, describes "the lower tier including a native interface 246 that converts the APIs exported by the data caching layer 254 into a platform-independent language, such as Java", and "the management façade 244 provides....the native interface 246 converts the platform-specific kernel routine API's to platform independent interfaces". The disclosure does not support the claimed limitations of (a) and (b).

b.   **As to claims 11 and 25,** they are apparatus claim and program product

claim of claim 1. They are rejected for the same reason as claim 1 above.

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

8.   Claims 1 – 25 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

c.   The following terms lack proper antecedent basis:

i.   The interface layer API, the management facade – claims 1, 11,

and 25;

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   **Claims 1 – 7, 9 – 17, 19 – 23, and 25 are rejected under 35 U.S.C. 103(a) as**

being unpatentable over Bowman-Amuah, US patent no. 6,332,163 in view of the

admitted prior art (APA) pages 1 – 2.

11.   **As to claim 1,** Bowman-Amuah teaches a method for managing a data caching

(caching web pages, col. 108 lines 40 - col. 109 lines 10) service from a management

terminal (terminal, col. 61 lines 5 – 10) in a computer system having a host computer

system with a host memory (memory on the web server, col. 108 lines 40 - col. 109

lines 10), the method comprising the steps of:

(a) inserting an interface layer (interface, col. 138 lines 55 – 67) exporting a

platform dependent API;

(b) running, in the host, management facade software (emulate terminal software

in the terminal services, col. 61 lines 5 – 10) that converts the interface layer API to

platform-independent method calls;

(c) running, in the host (three-tier architectures can runs either on the same host

or different host, col. 23 lines 19 – 35), a federated bean (EJB, col. 277 lines 1 – 6) that

generates method calls to the management facade to control the interface layer;

(d) controlling the federated bean (col. 277 lines 1 – 6) to be enable a data read

cache by instructing the interface layer to intercept request; if the data is in the host

memory; and retrieve the data from the network if the data is not in the host memory (if

the page is available, then web server.... Network, col. 10 lines 1 – 10).

Bowman-Amuah does not explicitly teach that the data from network contained in

a storage device, the interface layer for controlling data passing between the driver

software and the storage device, and retrieve the data from the storage device if the

data is not in the host memory,

The APA teaches at least one storage device (disk or storage space, page 1 lines 10 – 23) connected to the computer system by driver software (page 1 lines 10 – 23, and retrieving the data from the storage device if the data is not in the host memory (if the data is in the cache memory .... Disks are accessed to retrieve data, page 2 lines 5 – 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Bowman-Amuah and the APA's system because the APA's storage device would provide an alternative choice of storing data outside of host memory when host memory is full, and therefore, minimizing upgrading the memory size, and they all teach caching techniques.

12.   **As to claims 2 and 3,** Bowman-Amuah teaches the step of controlling the federated bean with a command line interface and graphical user interface (the keyboard and screen characteristics, col. 61 lines 5 – 10).

13.   **As to claim 4,** Bowman-Amuah teaches the step of using the federated bean to disable the read cache (do not need to read cache when cached data exist, col. 192 lines 42 – 67).

14.   **As to claim 5**, Bowman-Amuah teaches the step of using the federated bean to set characteristic of the read cache (EJB, col. col. 277 lines 1 – 6).

15.   **As to claim 6,** Bowman-Amuah teaches the computer system further comprises

non-volatile memory and the method further comprises the step of controlling the

federated bean to enable a data write cache by instructing the interface layer to

intercept requests to write data to the storage device and to write the data to the non-

volatile memory (saved in non-volatile storage, col. col. 277 lines 10 – 20).

16.   **As to claim 7,** Bowman-Amuah teaches the step of enabling a flusher thread to

periodically copy data in the non-volatile memory to the storage device (thread, col. 291,

lines 55 – 60).

17.   **As to claim 9,** Bowman-Amuah teaches the step of using the federated bean to

disable the write cache (do not need to write cache when cached data exist, col. 192

lines 42 – 67).

18.   **As to claim 10,** Bowman-Amuah teaches the step of using the federated bean to

set characteristic of the write cache (EJB, col. col. 277 lines 1 – 6).

19.   **As to claim 11,** it is the apparatus claim of claim 1. See rejection for claim 1

above.

20.   **As to claims 12 – 17,** see rejection for claims 2 - 7 above.

21.   **As to claims 19 – 20**, see rejection for claim 9 – 10 above.

22.   **As to claim 21**, it is the product claim of claim 1. See rejection for claim 1
above.

23.   **As to claims 22 - 23**, see rejection for claims 6 - 7 above.

24.   **As to claim 25**, it is the program claim of claim 1. See rejection for claim 1
above.

25.   **Claims 8, 18, and 24 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Bowman-Amuah, US patent no. 6,332,163 in view of the
admitted prior art (APA) pages 1 – 2, and further in view of Nally, US patent no.
6,298,478.**

26.   **As to claim 8,** Bowman-Amuah and the APA do not teach the step of enabling a
plurality of flusher threads wherein the number of enabled flusher threads is determined
by the federated bean.

        Nally teaches the step of enabling a plurality of flusher threads wherein the
number of enabled flusher threads is determined by the federated bean (the EJB object
locates the currently-active threads….the threads, col. 16 lines 20 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Bowman-Amuah, APA, and Nally's system because Nally's determining enabled threads by federated bean would provide a good task management for using threads when necessary to save resources.

27.   **As to claims 18 and 24**, see rejection for claim 8 above.

Conclusion

28.   The prior art made of record but not relied upon request is considered pertinent to applicant's disclosure.

Butts, US patent no. 6,205,415, demonstrating web emulator server.

Craig, US patent no. 6,757,708, demonstrating caching dynamic content using beans.

Anonymous, "Core plans first quarter release of T27 and UTS Java emulators", demonstrating Emulation Beans.

29.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Ph
November 23, 2004

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